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Applicant : Huan-Cheng Chang et al.

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Serial No. : 10/726,071

Examiner : Unknown

Filed : December 1, 2003

Title : NANOPARTICLE ION DETECTION

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

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Applicants disclose the documents listed on the attached form PTO-1449.

This statement is being filed before the receipt of a first Office action on the merits.

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Respectfully submitted,

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| Substitute Form PTO-1449<br>(Modified)   | U.S. Department of Commerce<br>Patent and Trademark Office | Attorney's Docket No.<br>08919-109001 | Application No.<br>10/726,071 |
| <b>Information Disclosure Statement<br/>by Applicant</b><br>(Use several sheets if necessary)<br>(37 CFR §1.98(b)) |  | Applicant<br>Huan-Cheng Chang et al.  |                               |
|  |  | Filing Date<br>December 1, 2003       | Group Art Unit                |

**Other Documents (include Author, Title, Date, and Place of Publication)**

| Examiner Initial | Desig. ID | Document  |
|------------------|-----------|---|
|                  | AA        | R. E. March et al. "Review of the Development of the Quadrupole Ion Trap". Quadrupole Storage Mass Spectrometer, pp. 6-7, 13, Wiley, 1989.  |
|                  | AB        | R. F. Wuerker et al. "Electrodynamic Containment of Charged Particles". Journal of Applied Physics 30(3):342-349, 441-442.  |
|                  | AC        | R. E. March et al. "Nonlinear Ion Traps". Practical Aspects of Ion-Trap Mass Spectrometry, CRC Press, Boca Raton, FL, Vol. 2, pp. 153-166, 1995.  |
|                  | AD        | I.S. Gilmore et al. "Ion detection efficiency in SIMS: dependencies on energy, mass and composition for microchannel plates used in mass spectrometry". International Journal of Mass Spectrometry 202:217-229, 2000.               |
|                  | AE        | R. E. March et al. "Quadrupole ion trap mass spectrometry: a view at the turn of the century". International Journal of Mass Spectrometry 200:285-312, 2000.  |
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|                  | AL        | W. H. Benner. "A Gated Electrostatic Ion Trap To Repetitiously Measure the Charge and m/z of Large Electrospray Ions". Anal. Chem. 69:4162-4168, 1997.  |
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|                  | AP        | M. Frank et al. "Energy-Sensitive Cryogenic Detectors for High-Mass Biomolecule Mass Spectrometry". Mass Spectrometry Reviews 18:155-186, 1999.   |
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|                  | AR        | Y. Cai et al. "Single-Particle Mass Spectrometry of Polystyrene Microspheres and Diamond Nanocrystals". Analytical Chemistry 74(1):232-238, January 1, 2002.  |
|                  | AS        | Y. Cai et al. "Calibration of an audio-frequency ion trap mass spectrometer". International Journal of Mass Spectrometry 214:63-73, 2002.   |

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| Substitute Form PTO-1449<br>(Modified)<br><b>Information Disclosure Statement</b><br><b>by Applicant</b><br>(Use several sheets if necessary)<br>MAR 29 2004<br>(37 CFR §1.98(b)) | U.S. Department of Commerce<br>Patent and Trademark Office | Attorney's Docket No.<br>08919-109001 | Application No.<br>10/726,071 |
|   | Applicant<br>Huan-Cheng Chang et al.                       |                                       |                               |
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**Other Documents (include Author, Title, Date, and Place of Publication)**

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|------------------|-----------|---|
|                  | AT        | H. C. Van de Hulst. "Conservation of Energy and Momentum". Light Scattering by Small Particles, pp. 11-12, Wiley 1957.  |
|                  | AU        | Y. Cai et al. "Ion Trap Mass Spectrometry of Fluorescently Labeled Nanoparticles". Analytical Chemistry, American Chemical Society, January 23, 2003, pp. A-G.  |
|                  | AV        | R. P. Haugland. "Molecular Probes: Material Safety Data Sheet". Handbook of Fluorescent Probes and Research Chemicals, 6 <sup>th</sup> Edition, Molecular Probes, Eugene, 1996.   |
|                  | AW        | X. S. Xie et al. "Optical Studies of Single Molecules at Room Temperature". Annu. Rec. Phys. Chem 49:441-48, 1998.  |
|                  | AX        | E. J. Davis. "A History of Single Aerosol Particle Levitation". Aerosol Science and Technology 26(3): 212-254, March 1997.  |
|                  | AY        | W. B. Whitten et al. "Single-Molecule Detection Limits in Levitated Microdroplets". Anal. Chem. 63:1027-1031, 1991.   |
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|                  | AEE       | M. Scalf et al. "Controlling Charge States of Large Ions". Science 283:194-197, January 8, 1999.  |
|                  | AFF       | L. Ding et al. "A simulation study of the digital ion trap mass spectrometer". International Journal of Mass Spectrometry 221:117-138, 2002.  |
|                  | AGG       | J. Qin et al. "A Practical Ion Trap Mass Spectrometer for the Analysis of Peptides by Matrix-Assisted Laser Desorption/Ionization". Anal. Chem. 68:1784-1791, 1996.   |
|                  | AHH       | C. Weil et al. "Multiparticle Simulation of Ion Injection into the Quadrupole Ion Trap Under the Influence of Helium Buffer Gas Using Short Injection Times and DC Pulse Potentials". Rapid Communications in Mass Spectrometry 10:742-750, 1996. |
|                  | AII       | V. M. Doroshenko et al. "Injection of Externally Generated Ions into an Increasing Trapping Field of a Quadrupole Ion Trap Mass Spectrometer". Journal of Mass Spectrometry 32:602-615, 1997.   |
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|                  | AKK       | S. T. Quarmby et al. "Fundamental studies of ion injection and trapping of electrosprayed ion on a quadrupole ion trap". International Journal of Mass Spectrometry 190/191:81-102, 1999.   |
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|                  | AMM       | K. Yoshinari. "Theoretical and numerical analysis of the behavior of ions injected into a quadrupole ion trap mass spectrometer". Rapid Communications in Mass Spectrometry 14:215-223, 2000.   |

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|                  | ANN       | A. D. Appelhans et al. "Measurement of external ion injection and trapping efficiency in the ion trap mass spectrometer and comparison with a predictive model". International Journal of Mass Spectrometry 216:269-284, 2002. |
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|                  | ARR       | G. Hars et al. "Application of quadrupole ion trap for the accurate mass determination of submicron size charged particles". Journal of Applied Physics 77(9):4245-4250, May 1, 1995.  |
|                  | ASS       | Y. Zerega et al. "A dual quadrupole ion trap mass spectrometer". International Journal of Mass Spectrometry 190/191:59-68, 1999.   |
|                  | ATT       | M. A. Tito et al. "Electrospray Time-of-flight Mass Spectrometry of the Intact MS2 Virus Capsid". Journal of American Chemical Society 122:3550-3551, 2000.  |
|                  | AUU       | A. A. Rostom et al. "Detection and selective dissociation of intact ribosomes in a mass spectrometer". PNAS 97(10):5185-5190, May 9, 2000.   |
|                  | AVV       | S. D. Fuerstenau et al. "Mass Spectrometry in an Intact Virus". Angew. Chem. Int. Ed. 40(3): 542-544, 2001.  |
|                  | AWW       | M. D. Barnes et al. "Detection of Single Rhodamine 6G Molecules in Levitated Microdroplets". Anal. Chem. 65:2360-2365, 1993.   |
|                  | AXX       | S. Schlemmer et al. "Nondestructive high-resolution and absolute mass determination of single charged particles in a three-dimensional quadrupole trap". Journal of Applied Physics 90(10):5410-5418, November 15, 2001.       |
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|                  | AZZ       | S.-C. Wang et al. "Plastic Microchip Electrophoresis with Analyte Velocity Modulation. Application to Fluorescence Background Rejection". Anal. Chem. 72:1448-1452, 2000.  |
|                  | AAAA      | J. R. Taylor et al. "Probing Specific Sequences on Single DNA Molecules with Bioconjugated Fluorescent Nanoparticles". Anal. Chem. 72:1979-1986, 2000.   |

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